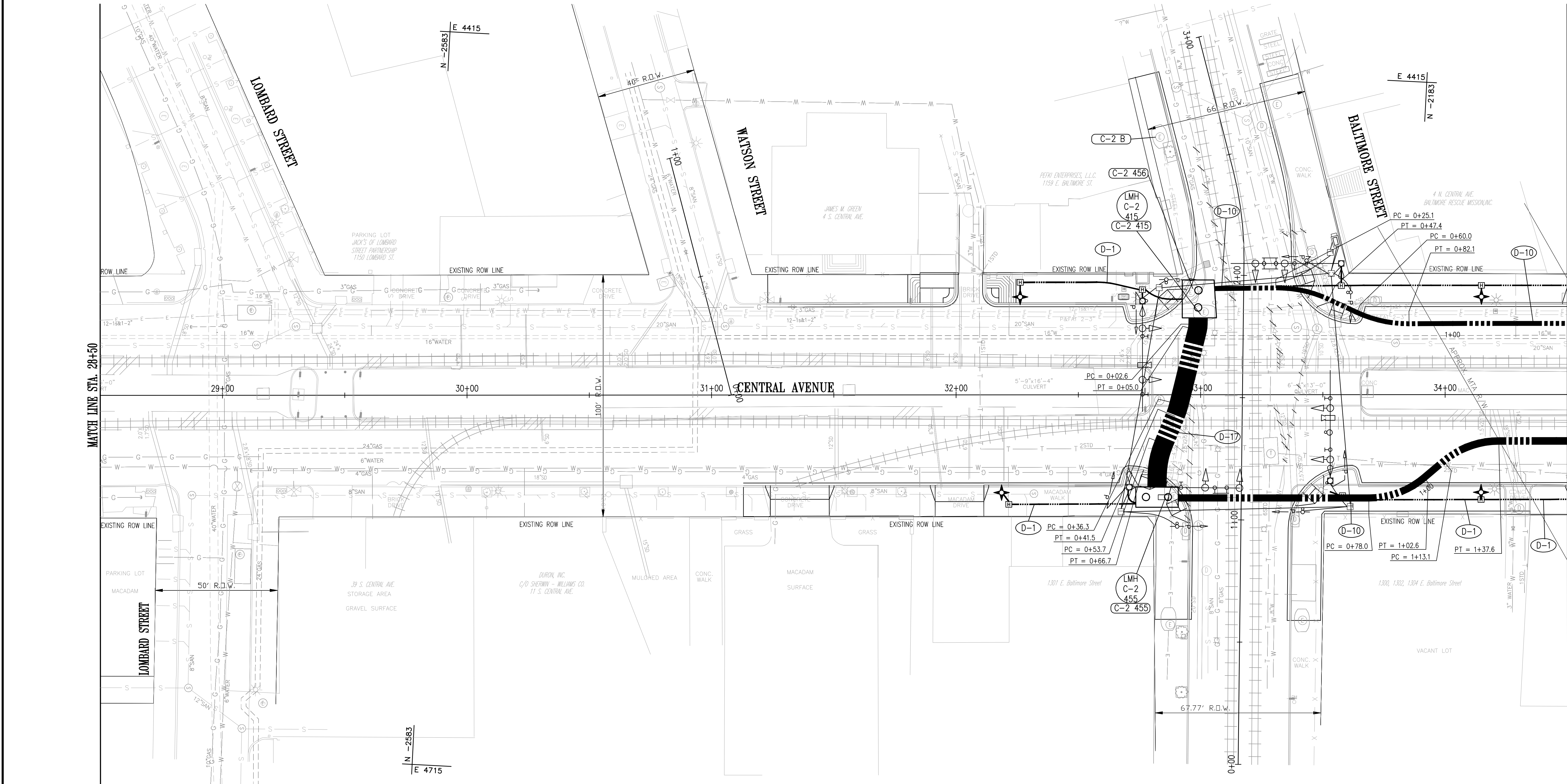


REVISIONS			
NO.	DESCRIPTION	DATE	BY
1		9/8/11	DHK



DUCTBANK STAKE OUT CHART			
DESCRIPTION	DUCTBANK STATION	BASELINE STATION	OFFSET
LMH C-2 415 TO MATCHLINE STATION 34+50			
BEGIN	0+00	33+05.7	43.4' LT.
PC	0+25.1	33+30.8	43.7' LT.
PT	0+47.4	33+52.4	39.0' LT.
PC	0+80.0	33+63.9	33.6' LT.
PT	0+82.1	33+85.3	29.0' LT.
LMH C-2 455 TO MATCHLINE STATION 34+50			
BEGIN	0+00	32+90.8	42.3' RT.
PC	0+78.0	33+68.8	42.4' RT.
PT	1+02.6	33+91.4	34.1' RT.
PC	1+13.1	33+99.4	27.3' RT.
PT	1+37.6	34+22.0	19.1' RT.
LMH C-2 415 TO LMH C-2 455			
BEGIN	0+00	32+99.0	31.4' LT.
PC	0+02.6	32+99.0	28.8' LT.
PT	0+05.0	32+98.7	26.5' LT.
PC	0+36.3	32+91.2	3.9' RT.
PT	0+41.5	32+98.5	8.8' RT.
PC	0+53.7	32+94.9	20.1' RT.
PT	0+66.7	32+82.1	32.8' RT.
END	0+71.6	32+82.1	37.7' RT.

DRAWN BY: M.M.M.
EXAMINED BY: D.K.

GENERAL CONDUIT NOTES (CON'T):

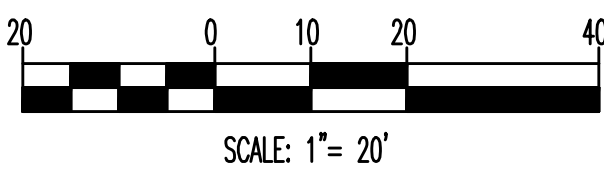
- EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR THE CONVENIENCE OF THE CONTRACTOR. C.C. JOHNSON & MALHOTRA, P.C. DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT LOCATIONS TO HIS/HER OWN SATISFACTION, PRIOR TO COMMENCING WORK.
- SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY. ANY DEVIATIONS FROM THE PLANS WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST 14 DAYS PRIOR TO STARTING ANY WORK:
MR. KEN CHING (STREET LIGHT MAINTENANCE) 410-396-1311
MISS UTILITY 800-257-7777
MR. JEFF HARTMAN (CONDUIT MAINTENANCE) 410-396-1515
- CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER OR NEAR EXISTING UTILITIES.
- PROPOSED MANHOLES ARE REQUIRED TO HAVE A MINIMUM OF TWO (2) FEET OF COVER FROM THE PROPOSED GROUND LINE TO THE TOP OF THE MANHOLE ROOF SLAB STD. DETAIL BC 825.11 UNLESS OTHERWISE SHOWN.
- FURNISH AND MAINTAIN ALL NECESSARY PUMPS, FLUMES, GUTTERS, ETC., TO KEEP THE EXCAVATION FREE FROM WATER AT ALL TIMES DURING THE PROGRESS OF WORK. WATER SHALL BE DIRECTED TO A POINT APPROVED BY THE CITY.
- TRENCHES FOR UNDERGROUND DUCTBANK SHALL BE EXCAVATED TO A UNIFORM GRADE AND BRACED AND SHEATHED. WATER SHALL BE REMOVED AS NECESSARY. NO CONDUIT SHALL BE LAID UNDER WATER.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ANY PROPOSED (PRECAST AND/OR CAST-IN-PLACE) MANHOLES MEETING HS25 LOAD REQUIREMENTS. THE SHOP DRAWINGS SHALL BE SEALED, DATED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MARYLAND. COST OF THE DESIGN SHALL BE INCIDENTAL TO THE MANHOLE ITEMS.
- HORIZONTAL BENDS AND SWEEPS IN THE PRIMARY MULTI-DUCT CONDUIT SYSTEM SHALL HAVE A MINIMUM RADIUS OF 35' OR AS NOTED ON THE PLANS. IF DUCT SECTIONS ARE TO BE INSTALLED WITH A RADIUS LESS THAN 35', THE DUCT SHALL BE COMPOSED OF PREFORMED FACTORY-FABRICATED SEGMENTAL SECTIONS. ALL VERTICAL BENDS SHALL HAVE A MINIMUM RADIUS OF 20' OR AS NOTED ON THE PLANS.
- ALL DUCTS SHALL LEAVE AT 90 DEGREES TO THE MANHOLE WALL AND PROCEED AT THAT ANGLE FOR A MINIMUM OF FIVE (5) FEET UNLESS OTHERWISE SHOWN.
- ALL CONCRETE DUCT ENCASUREMENT SHALL BE MIX NO. 1.
- ALL CONCRETE ENCASED PVC DUCT SHALL BE A MINIMUM CLASS OF DB-120 WITH A WIRE TEMPERATURE RATING OF NINETY (90) DEGREES.
- ALL UNDERGROUND DUCTBANKS SHALL HAVE MAGNETICALLY DETECTABLE PLASTIC WARNING TAPE INSTALLED 12" ABOVE THE DUCT FOR THE ENTIRE LENGTH OF THE DUCT.
- CONTRACTOR MAY BE REQUIRED TO ADJUST THE HORIZONTAL AND/OR VERTICAL CONDUIT ALIGNMENT AS SHOWN ON THE PLANS TO AVOID CONFLICTS WITH EXISTING UTILITIES. ALL ALIGNMENTS ARE TO BE APPROVED BY THE ENGINEER.
- AT ALL ENTRANCES INTO MANHOLES, THE CONTRACTOR SHALL FURNISH AND INSTALL DUCT TERMINATORS IN ACCORDANCE WITH BALTIMORE CITY STANDARDS.
- UPON COMPLETION OF THE CONDUIT INSTALLATION, THE CONTRACTOR SHALL CLEAR ALL CONDUITS OF ANY DIRT AND DEBRIS AND TEST THE ADEQUACY OF THE CONDUIT WITH AN APPROVED MANDREL DEVICE. UPON CORRECTION OF DEFICIENCY, IF ANY, THE CONTRACTOR SHALL INSTALL IN EACH DUCT, A BRAIDED NYLON LINE HAVING A MINIMUM TENSILE STRENGTH OF FOUR HUNDRED (400) POUNDS. THESE COSTS SHALL BE INCIDENTAL TO CONDUIT INSTALLATION.
- THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT PRINTS ON WHICH THEY SHALL NOTE, IN RED, THE HORIZONTAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND APPURTENANCES INSTALLED. THIS "AS-BUILT" SET OF PRINTS SHALL BECOME PROPERTY OF THE CITY OF BALTIMORE AT THE TERMINATION OF THE PROJECT.
- CONTRACTOR TO REMOVE EXISTING CONDUIT TO BE ABANDONED AS NECESSARY TO PERFORM NEW CONSTRUCTION AND PLUG EXISTING CONDUIT WITH MIX 2 CONCRETE. PRICE AND PAYMENT SHALL BE INCIDENTAL TO THE INSTALLATION OF NEW CONDUIT AND MANHOLES.
- THE CONDUIT DUCT SECTION SHALL HAVE A MINIMUM COVER OF THREE FEET SIX INCHES (3'-6") UNDER ROADWAYS AND FOUR FEET (4') UNDER SIDEWALKS. THE CONTRACTOR MAY BE REQUIRED TO ADJUST THE DEPTH OF THE CONDUIT TO AVOID CONFLICTS WITH EXISTING OR PROPOSED UTILITIES. WHERE IT IS NOT POSSIBLE TO ADHERE TO THE MINIMUM COVER SPECIFIED BECAUSE OF UNDERGROUND OBSTRUCTIONS, THE ENGINEER SHALL GIVE APPROVAL BEFORE THE CONFIGURATION OF THE DUCT SECTION OR DEPTH OF COVER IS REVISED.

GENERAL CONDUIT NOTES (CON'T.):

- IN ORDER TO ELIMINATE THE COST OF OFF-SITE DISPOSAL, THE CONTRACTOR SHALL LOAD, TRANSPORT AND DELIVER ALL EXCESS EARTH AND SPOILS FROM EXCAVATIONS TO STOCKPILES LOCATED ON-SITE AS DIRECTED BY THE ENGINEER. NO EXCESS EARTH OR SPOILS MATERIALS ARE TO BE REMOVED FROM THE SITE WITHOUT PROPER WRITTEN AUTHORIZATION FROM THE ENGINEER. NO PAYMENT WILL BE MADE FOR THIS OPERATION, BUT IT SHALL BE INCIDENTAL TO THE APPLICABLE UTILITY OR EARTHWORK ITEM.

NOTES:

- FOR DUCTBANK PROFILES, SEE SHEETS E-12 THRU E-19.
- FOR DUCTBANK DETAILS, SEE SHEET E-11.
- FOR MANHOLE DETAILS, SEE SHEETS E-7 THRU E-10.
- FOR MAINTENANCE OF TRAFFIC, SEE "MT" SHEETS.
- FOR LIGHTING, SEE "L" SHEETS.
- FOR TRAFFIC SIGNALS, SEE "TS" SHEETS.
- ADJUST ALL MANHOLE FRAMES AND COVERS TO FINISHED GRADE ELEVATIONS.



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WHITMAN, REQUARDT
& ASSOCIATES, LLP
300 South Caroline Street, Baltimore, Maryland 21201
410-528-1100

CONDUIT SCHEDULE

- (D-1) TYPE Y DUCT SECTION, 1-3" I.D. PVC
- (D-2) TYPE X DUCT SYSTEM, 2-3" I.D. PVC
- (D-10) TYPE TE DUCT SYSTEM, 6-5" & 3-3" I.D. PVC
- (D-17) TYPE TL DUCT SYSTEM, 28-5", 1-4" & 5-3" I.D. PVC
- (D-18) TYPE TL DUCT SYSTEM, 14-5", 4-4" & 4-3" I.D. PVC

CITY OF BALTIMORE
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. TR08310
SHA. NO. BC 320-001-815
F.A.P. STP-3057(4)N
REHABILITATION OF CENTRAL AVENUE
AND STORM DRAIN FROM EASTERN AVENUE
TO MADISON STREET
ELECTRICAL CONDUIT PLAN
STA. 28+50 TO STA. 34+50

SCALE: AS SHOWN DATE: JUNE 21, 2010
TRANSPORTATION ENGINEERING & CONSTRUCTION DIVISION SHEET 192R OF 242

E-01